

## **REMARKS**

In the Office Action of June 22, 2004, claims 22-91 were rejected. Applicant hereby responds to the Office Action based on the following remarks.

### **Claim Objections**

Claims 23-91 have been amended to correct the claim numbering mistake noted by the Examiner. Claims 23-91 now correspond to claims 34-102, and as such, the new claim numbering will be used throughout this Response. No new matter has been added. Upon entry of the foregoing amendments, claim 22, and re-numbered claims 34-102 are pending in the above-identified patent application. Claims 22, 34, and 69 are in independent format.

### **Rejection under 35 U.S.C. § 101**

On page 3 of the Office Action, the Examiner rejected claims 22, 34-102 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Examiner states that they, “have no connection to the technological arts.” Applicant respectfully traverses.

Title 35 U.S.C. § 101 provides:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

As the Supreme Court has held, Congress chose the expansive language of 35 U.S.C. § 101 so as to include “anything under the sun that is made by man.” Diamond v. Chakrabarty, 447 U.S. 303, 308-309, 206 USPQ 193, 197 (1980). In subsequent decisions, the Federal Circuit has sought to clarify the scope and boundaries of 35 U.S.C. § 101, holding that patentability under 35 U.S.C. § 101 requires that the invention must

be: (i) directed to statutory subject matter, i.e., the invention must be a machine, manufacture, composition of matter or a process; and (ii) a “useful” invention.

In State Street Bank & Trust Co. v. Signature Financial Group, Inc., 149 F.3d 1368 (Fed. Cir. 1998), the Federal Circuit Court held that in order to meet the utility requirement imposed by 35 U.S.C. § 101, an invention must produce a “useful, concrete and tangible result,” State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. Applying this test, the State Street Court held that the “transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces “a useful, concrete and tangible result” -- a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.” State Street, 149 F.3d at 1373, 47 USPQ2d at 1601.

In re Alappat, 33 F.3d 1526 (Fed. Cir. 1994), provides another example of a useful, concrete and tangible result. The Alappat Court held that claims drawn to a rasterizer for converting discrete waveform data samples into anti-aliased pixel illumination intensity data to be displayed on a display means were held to be directed to patentable subject matter since the claims defined “a specific machine to produce a useful, concrete, and tangible result.” In re Alappat, 33 F.3d 1526, 1544. Accordingly, computer based systems and software that manipulate financial information (State Street) or display relationships between information representing signal data (Alappat) are sufficiently “real world” to meet the useful, concrete and tangible test enunciated by the State Street Court.

Likewise, in AT&T Corp. v. Excel Comm., the Court found that claims related to deriving a billing value using a simple Boolean mathematical principle constituted patentable subject matter under 35 U.S.C. § 101. 50 U.S.P.Q.2d 1447, 1451-52 (Fed. Cir. 1999). Thus, as stated by the U.S. Patent and Trademark Office, “an abstract idea when practically applied to produce a useful, concrete and tangible result satisfies Section 101.” (See, e.g., <http://www.uspto.gov/web/menu/pbmethod/trangmaterials.ppt>).

The Manual of Patent Examining Procedure provides guidance for distinguishing between that which is useful, concrete and tangible and that which is not. The MPEP Version 8, Revision 2, Section 2106 provides that the, “Office personnel have the burden to establish a *prima facie* case that the claimed invention as a whole is directed to solely an abstract idea or to manipulation of abstract ideas or does not produce a useful result. Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101.” (Emphasis added). Having reviewed the law regarding the utility requirement under 35 U.S.C. § 101, we next turn to the Applicant’s claim.

The Examiner rejected claims 22, 34-102, of which claims 22, 34, and 69 are representative. Claim 22, as amended, recites: “In an electronic trading system, a computer based method for displaying information regarding the trading of a plurality of goods.” Applicant submits that claim 22 meets the statutory subject matter requirement of 35 U.S.C. § 101. In particular, claim 22 is directed to a statutory class, i.e., a process or “method,” and it recites a specific application, i.e., it is a computer based method for, “displaying information regarding the trading of a plurality of goods.” This application produces a useful, concrete and tangible result.

Likewise, claim 34, as amended, recites: “A computer based method for displaying transactional information relating to the trading of at least two products electronically.” Claim 69 recites: “A computer based method for displaying market information relating to electronic trading of products.” Like claim 22, Applicant submits that claims 34 and 69 meet the statutory subject matter requirement of 35 U.S.C. § 101, because claims 34 and 69 are directed to a statutory class, i.e., a method, and recite a useful, concrete and tangible application, i.e., “displaying transaction information relating to the trading of at least two products electronically” and “displaying market information relating to electronic trading of products,” respectively. Claims 35-68 depend from claim 34, and claims 70-102 depend from claim 69.

Thus, each of the rejected claims, 22, 34-102, meets the statutory requirements of 35 U.S.C. § 101.

### **Rejection under 35 U.S.C. § 112**

On page 7 of the Office Action, the Examiner rejected claims 33-38, 41, 68-73 and 76 (which now correspond to claims 44-49, 52, 79-84 and 87) under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully traverses each of these rejections and requests reconsideration.

Claim 34, which is the parent claim to rejected claims 44-49, recites generating “a value axis” for which “indicators representing orders” for the products are displayed in relation. Claims 44-49 add the limitation of “displaying an action line relative to the value axis.” (Emphasis added). As such, according to claims 44-49, indicators representing orders for products (recited in claim 34) and an action line (recited in claims 44 through 49) are displayed relative to the “value axis” called for in parent claim 34. Claims 44-49, and for similar reasons claims 79-84, should be immediately allowable in their present form.

Amended claim 52 clearly has a functional relationship to the steps recited in parent claim 34, and in particular includes the limitation of “updating the display of indicators,” the display of which is recited in claim 34, to include the order that was placed, which is called for in claim 52. Amended claim 87 also clearly has a functional relationship to the steps recited in parent claim 69, and in particular includes the limitation of the placed order “having a value associated with the common value axis,” the common value axis of which is recited in claim 69. Thus, claims 52 and 87 are allowable in their present form.

### **Rejection under 35 U.S.C. § 102(b) over Marshall**

On page 8 of the Office Action, the Examiner rejected claims 22 and 23 (which now corresponds to claim 34) under 35 U.S.C. § 102(b) as being anticipated by Marshall (US Pat. 5,675,746). Because Marshall fails to show each and every element recited in the claims, Applicant respectfully traverses and requests reconsideration.

Applicant's claim 22 calls for a computer based method comprising the steps of "displaying a plurality of book axes" where each book axis represents a book for a good and each book comprises orders including a bid order and a sell order for the good. Claim 22 further calls for "displaying a value axis in relation to the plurality of book axes" where the value axis has "units of a value common to the plurality of goods," and "displaying indicators representing at least one order for at least one of the plurality of goods," where the indicators are displayed in locations along the book axes corresponding to the value axis. Claim 34 recites a similar limitation as claim 22, which is "generating a value axis" where the values along the value axis represent values associated with at least two products; and then the step of "displaying indicators" representing orders for the at least two products relative to the axis. Marshall, at the very least, does not show any of these elements.

Marshall discloses a three dimensional world using a known three dimensional coordinate system which is defined by three separate axes, all of the axes are perpendicular from each other (e.g., an "X-axis," "Y-axis," and a "Z-axis" described in Col. 11, lines 30-55). Marshall's virtual reality world is then divided up into a grid comprising squares, such that each square represents individual pieces of information. For example, FIG. 3a (described in Col. 13, lines 38 et seq.) shows a top perspective of the virtual world having "stock markets" for a parameter of a first axis (a first dimension) and "industry groups" for a parameter of a second axis (along a second dimension). Example squares that resulted include a square for "Tokyo oil" and a square for "Hong Kong oil." Within these squares are metaphors used to represent different characteristics of the financial data and are placed within a square (e.g., see example arrangement of metaphors in FIG. 3a-3d). The shapes, colors, positions, animations and textures of the metaphors can be selected by the user to represent different characteristics of the financial data. (e.g., see Col. 6, lines 41 et seq.). The user is able to travel through the metaphors, which are displayed in such a way to allow the user to easily locate relevant financial information (e.g., locate metaphors pertaining to "Hong Kong oil" or metaphors pertaining to "Tokyo oil"), interact with different characteristics and see financial trends (e.g., in addition to FIGS. 3a to 3d, see Col. 3, lines 59 et seq.).

Contrary to the Examiners suggestion on page 9 of the Office Action, Marshall does not describe displaying “[a] plurality of book axes” such that each book axis represents a “book” for a corresponding good as called for in Applicant’s claim 22. Rather, Marshall only shows squares containing metaphors which represent financial information in a graphic and animated way. Marshall does not describe the use of a “book axis” to convey information, such as “orders including a bid order and a sell order,” regarding the trading of a good. In fact, Marshall’s disclosure does not concern itself with a particular way of arranging the metaphors within a given square (e.g., see the random arrangement of the metaphors in the squares shown in FIGS. 3a-3d). Also, Marshall does not teach a “book” comprising “a bid order” or a “sell order,” rather Marshall teaches using a metaphor to represent different characteristics of the “stock” – Marshall does not teach displaying the actual orders of a good.

Nor does Marshall show or suggest “displaying a value axis in relation to the plurality of book axes,” where the value axis has units of “a value common to the plurality of goods,” as recited in Applicant’s claim 22. Rather, Marshall uses three perpendicular axes to define the virtual world according to some parameter, such as “stock markets” or “industry groups,” and then within that world, Marshall shows metaphors pertaining to only a single group, such as a “stock.” For example, the metaphors found in the square pertaining to “Tokyo oil” relates only to itself. Marshall does not show the relationship of financial information outside of a square other than how that information is categorized (e.g., a “stock market,” or an “industry group”).

Further Marshall does not show the step of “displaying indicators representing at least one order... wherein the indicators are displayed in locations along the book axes corresponding to the value axis,” as recited in Applicant’s claim 22, because at the very least, Marshall does not have “book axes” or “a value axis,” for which such indicators may be displayed.

With respect to claim 34, Marshall does not generate “a value axis wherein the values along the value axis represent at least two products,” as recited in claim 23. As indicated above, Marshall does not teach the use of a value axis to represent the relationship of metaphors from one square to another. Nor does Marshall teach the step

of “displaying indicators representing orders for the at least two products relative to the value axis,” as called for in claim 34.

Accordingly, independent claim 22 distinguishes over the asserted Marshall reference, at least by reciting any one or more of the steps of “displaying a plurality of book axes, each book axis representing a book for a corresponding one of the plurality of goods...,” displaying “a value axis in relation to the plurality of book axes, the value axis having units of a value common to the plurality of goods.”

Likewise, independent claim 34 distinguishes over the asserted Marshall reference, at least by reciting any one or more of the steps of “generating a value axis wherein the values along the value axis represent values associated with the at least two products” and “displaying indicators representing orders for the at least two products relative to the value axis.”

Applicant therefore respectfully submits that Marshall fails to anticipate the subject matter of claims 22 and 34.

#### **Rejection under 35 U.S.C. § 102(b) over Nevo**

On page 10 of the Office Action, the Examiner rejected claims 23-24, 26, 29-31, and 53-57 (which now correspond to claims 34-35, 37, 40-42, and 64-68) under 35 U.S.C. 102(b) as being anticipated by Nevo (US Pat. 5,946,666). Because Nevo fails to show each and every element recited in the claims, Applicant respectfully traverses and requests reconsideration.

Nevo teaches an apparatus and method for monitoring financial securities markets or financial securities to provide information regarding the status of the financial securities markets or securities. FIGS. 5 and 6 provide displays in accordance with the present invention.

Nevo does not show, much less suggest, the invention as claimed. In particular, Nevo does not show “generating a value axis wherein values along the value axis represent values associated with the at least two products,” as recited in Applicant’s claim 34. Nor does Nevo show “displaying indicators representing orders for at least two

products relative to the value axis,” as recited in claim 34. The Examiner points to FIG. 5 and to Col. 13, lines 13-25 in asserting this rejection. FIG. 5 shows values as they correspond to a particular security, such as “MS,” “Novel,” or “IBM.” Nevo does not teach generating a value axis where the values along the axis are associated with at least two products. In fact, looking at FIG. 5, there is no showing of a value axis that has values which represent values associated with values in one column versus the values in another column (e.g., the values 65, 82, and 115 are all different and have no relation with each). Instead, Nevo teaches having separate columns for showing financial data which have no relationship or association other than a user simply selecting to show them for analysis.

Independent claim 34 distinguishes over the asserted Nevo reference, and the remaining claims 35, 37, 40-42, and 64-68 depend ultimately from claim 34, and are patentable over Nevo for at least the same reasons that claim 34 is patentable over Nevo.

Applicant therefore respectfully submits that Nevo fails to anticipate the subject matter of claims 34-35, 37, 40-42, and 64-68.

#### **Rejections under 35 U.S.C. § 103(a)**

On page 12 of the Office Action, the Examiner rejected claims 25, 27, 28 under 35 U.S.C. 103(a) as being unpatentable over Nevo and further in view of Marshall. On page 13, the Examiner rejected claims 32, 39-40, 58-67, 74, 75, and 91 under 35 U.S.C. 103(a) as being unpatentable over Nevo.

The Examiner is reminded that to establish a prima facie case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation to modify the reference or combine reference teachings; (2) there must be a reasonable likelihood of success; and (3) the prior art references must teach or suggest all of the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

As discussed above, neither Marshall or Nevo disclose, teach or suggest various limitations of claims 22, 34, and 69 from which these rejected claims depend. For example, neither Marshall or Nevo teach or suggest at least the limitation of “displaying a



value axis in relation to [a] plurality of book axes, the value axis having units of a value common to the plurality of goods,” as called for in claim 22. Claims 34 and 69 mirror a similar limitation as claim 22.

Therefore, for at least the foregoing reasons, Applicant submits that claims 32, 39-40 and 58-67, 74, 75, and 91 are patentable over the individual and combined references. In light of the foregoing, Applicant submits that the present application is in condition for allowance and notice to that effect is hereby requested.

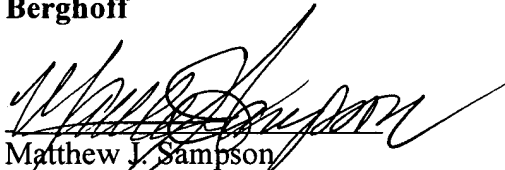
### **Conclusion**

In light of the foregoing remarks, applicant submits that the application is now in condition for allowance and notice to that effect is hereby requested. If the Examiner believes that further dialog would expedite consideration of the application, he is invited to contact the applicant’s Vice President of Intellectual Property, Steven F. Borsand, at (312) 476-1018 or Patent Agent, Mark W. Triplett at (312) 476-1151.

Respectfully submitted,  
**McDonnell Boehnen Hulbert &  
Berghoff**

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By :

  
Matthew J. Sampson  
Reg. No. 35,999